CFP2000 Result

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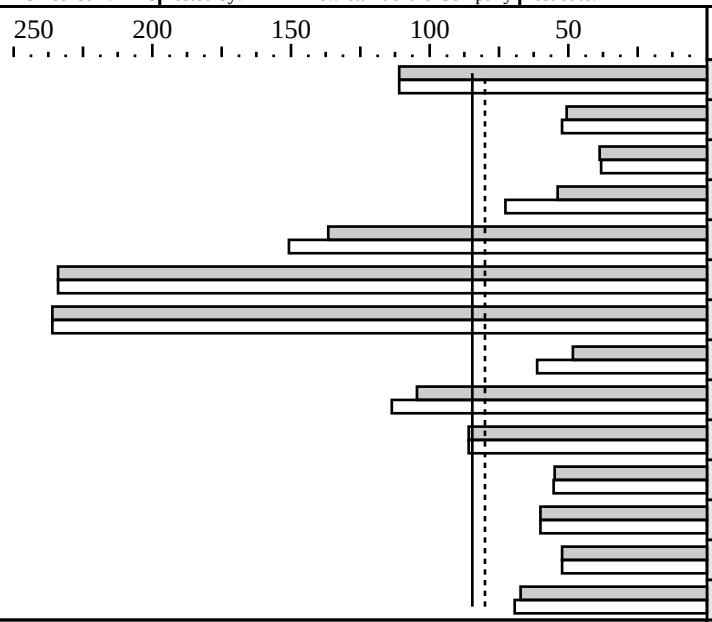
Hewlett-Packard Company

ProLiant ML370 G5 (3.0GHz, Intel Xeon processor 5160)

SPECfp_rate2000 = 84.6

SPECfp_rate_base2000 = 80.1

SPEC license #: 3 | Tested by: Hewlett-Packard Company | Test date: Jun-2006 | Hardware Avail: Jun-2006 | Software Avail: May-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	66.9	111	4	66.9	111
171.swim	4	284	50.6	4	275	52.3
172.mgrid	4	216	38.7	4	219	38.2
173.applu	4	181	53.8	4	134	72.7
177.mesa	4	47.6	137	4	43.1	151
178.galgel	4	57.5	234	4	57.5	234
179.art	4	51.1	236	4	51.1	236
183.equake	4	125	48.4	4	98.5	61.3
187.facerec	4	84.3	105	4	77.6	114
188.ammp	4	119	85.9	4	119	85.9
189.lucas	4	169	54.9	4	168	55.3
191.fma3d	4	162	60.1	4	162	60.1
200.sixtrack	4	97.7	52.2	4	97.7	52.2
301.apsi	4	179	67.2	4	174	69.3

Hardware

CPU:	Intel Xeon processor 5160 (3.0GHz, 4MB L2 shared, 1333MHz bus)
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2
Parallel:	No
Primary Cache:	32KB (I) + 32KB (D) (on chip) per core
Secondary Cache:	4096KB(I+D) (on chip) shared
L3 Cache:	N/A
Other Cache:	N/A
Memory:	8x2048MB PC2-5300F
Disk Subsystem:	1x36GB 10K SAS
Other Hardware:	

Software

Operating System:	RedHat Enterprise Linux 4.0 Advanced Server for AMD64/EM64T, Update 3 Kernel 2.6.9-34.ELsmp
Compiler:	Intel C++ Compiler for EM64T-based applications, (Version 9.1 Build 20060323) Intel Fortran Compiler for EM64T-based applications, (Version 9.1 Build 20060323) PathScale EKOPath(TM) Compiler Suite, Release 2.4
File System:	ext2
System State:	Multi-user run level 3

Notes/Tuning Information

```
+FDO: PASS1= -prof_gen  PASS2=-prof_use (Intel Compiler)
+FDO: PASS1= -fb_create fbdata PASS2=-fb_opt fbdata (PathScale Compiler)
ifort is the Intel Fortran compiler, icc is the Intel C++ compiler; and
pathf95 is PathScale Fortran compiler, pathcc is the PathScale C compiler.
Base tuning for C programs:  icc -fast -auto_ilp32 +FDO
Base tuning for FORTRAN programs:  ifort -fast +FDO
Portability:
-DSPEC_CPU2000_LP64 applied to all benchmarks
178.galgel:   -FI
Peak tuning:
168.wupwise:  basepeak=1
171.swim:     pathf95 -Ofast -LNO:fusion=2:simd=0 -WOPT:val=0 -march=em64t
172.mgrid:    pathf95 -Ofast -CG:load_exe=0 -LNO:blocking=off:prefetch_ahead=5
              -OPT:ro=3:unroll_size=256 -WOPT:mem_opnds=on -march=em64t
173.applu:    pathf95 -O3 -ipa -CG:load_exe=0
              -LNO:fission=1:fusion=2:blocking=off:full_unroll_size=9000
              -OPT:IEEE_a=3:ro=3 -TENV:X=3 -march=em64t
```

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Notes/Tuning Information (Continued)

```
177.mesa:     pathcc -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
              -GRA:optimize_boundary=on -march=em64t +FDO
178.galgel:   basepeak=1
179.art:      basepeak=1
183.equake:   icc -fast +FDO ONESTEP=yes -rcd -auto-ilp32
187.facerec:  pathf95 -Ofast -IPA:plimit=1500 -LNO:fusion=2
              -OPT:IEEE_NaN_Inf=off:ro=3:unroll_size=0 -march=em64t
188.ammp:     basepeak=1
189.lucas:    ifort -fast ONESTEP=yes
191.fma3d:    basepeak=1
200.sixtrack: basepeak=1
301.apsi:     pathf95 -Ofast -CG:load_exe=0 -LNO:opt=0:prefetch=1 -march=em64t
  BIOS Configuration Notes
    Power Regulator set to Static High
```